the main operation is done one month later. The operation consists in attaining apposition and retaining apposition without possibility of movement between the ends. The method of actually attaining apposition will depend upon the bone and the condition of the bone ends. The methods employed are the "slot" or "dovetailing" method, the "step" method, the sliding bone-graft, and bone transplantation, the slot being filled with an accurately fitting piece of bone cut from some other bone, usually the tibia. This last is the most successful type of bone transplantation. Speed is of importance as bone dries very quickly after exposure. The uncovered parts are bathed with warm saline. In every case, the ends are securely bound together by drilling holes and using thick thirty-day catgut. The whole limb is put up in plaster, paying particular attention to fixation of the joint above and below. A radiogram, taken through the plaster may be taken in a day or so to see that all is well. After bone grafting or transplantation it is wise not to remove the plaster before the end of three months and a protective splint used for further period. The length of time of non-union, even a period of years, should not deter one from operating with a reasonable certainty of a good result.

The Indications for Cholecystectomy.—MONSARRAT (*Brit. Med. Jour.*, 1921, p. 371), says that the problem in the treatment of cholecystitis whether associated with gallstones or not is to arrest infection and obviate its recurrence. The test of successful operation for cholecystitis, is whether the infection of the bile channels clears up, the liver function returns to normal with no recurrent symptoms from inflammatory reaction or adhesions in the operation area. It has been the author's experience that a considerable proportion of cases of cholecystitis treated by drainage fail to pass this test, for ill health is suffered referable to the persistence of the gall-bladder as a centre of infection. Chronic cholangitis with chronic pancreatitis, recurrent attacks of pain and tenderness in neighborhood of the wound, gastric distention, spasm and vomiting due to the angulation of the pylorus and duodenum by adhesions are resulting conditions. For these reasons, it seems advisable to remove a gall-bladder which has been attacked by cholecystitis of any type, because patients who have had the gall-bladder removed do not suffer any demonstrable disadvantage from its absence, while in calculous cholecystitis they are relieved of the double risk of reformation of stones and persistence of bile-duct inflammation. In cases of cholecystitis without calculi, patients are relieved of a diverticulum which would in all probability prove to be the source of a recrudescence of their intoxication. Granted that cholecystectomy is a cleaner performance and not a more serious operative risk than cholecystostomy—that the gall-bladder is of no particular functional value in the human subject, that it is, moreover, the nidus of persistent infections in the biliary channels—then argument for cholecystectomy as the normal operation in cholecystitis is overwhelming.

Treatment of Syphilis.—FELDMAN (*Amer. Jour. Syphilis*, 1921, v, 268) says that the results obtained in primary lues by treating the patient before his blood becomes positive is not much better than when treatment is instituted after systemic invasion. Salvarsan will clear up symptoms much more rapidly than mercury. The chances for obtaining a negative Wassermann reaction in cases of latent lues even in very old cases are very good and they should be treated. All early cerebrospinal cases can be cured and a proportionately large number of old cases are favorable influenced by ordinary intravenous salvarsan and intramuscular mercury injections. The advantage claimed for intraspinal treatment does not seem to compensate for its disadvantage. A negative Wassermann reaction obtained after a single course of a few months of treatment does not indicate that a cure has been effected. A comparatively large proportion of patients returned to the positive Wassermann after a period of one year without treatment. Treatment therefore should be kept up for at least one year after the first negative result and if the Wassermann is still negative at that time, treatment may be discontinued and the patient watched.

PEDIATRICS

UNDER THE CHARGE OF

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Masked Juvenile Tuberculosis.—Cooke and Hemplemann (*Am. Rev. Tuberculosis,* November, 1920), in attempt to show that it is during childhood that infection with tuberculosis occurs, studied 1556 children by the complement-fixation test. The results in 116 who had manifest tuberculosis including chiefly pulmonary, meningeal and bone involvement with some cases of generalized infection, were interesting. The tests were uniformly negative in infants under one year of age, and was positive in only one-fifth of the cases between the first and second years. From the third to the sixth year the percentage of positive reactions rose to 50 and with each succeeding year it increased rapidly so that between nine and fifteen years of age 82 per cent of children with such active tuberculosis gave a positive complement-fixation test. Another group of 556 cases with no evidence of infection with tuberculosis and with negative skin tuberculin reactions gave only 19, or 3.4 per cent, positive reactions to the complement-fixation test. Only twenty well children were examined, who had been observed during an obviously active tuberculosis some years before. These children were free from all signs for from two to six years, and only two gave positive complement-fixation tests. These rather striking figures in themselves indicate that positive fixation tests accompany evidence of clinical activity in tuberculosis, and are found in relatively small proportions of children with such infections. In 131 cases of masked juvenile tuberculosis no case was seen under one year of age, and only five in the second year. After two years of age there was an increasing proportion of positive reactions to 50 per cent from the second to the fourth years and to 95 per cent for from the twelfth to the fifteenth year. In 116 children over four years of age, 76 per cent were positive. In another group in which the only evidence of tuberculosis was a positive skin reaction only 16.6 per cent gave positive complement-fixation tests. Roentgen-ray pictures in 117 children gave deviation from the normal in all. The characteristic clinical picture of masked tuberculosis is history of frequent colds and coughs, attacks of unexplained fever, anorexia, loss of weight, and asthenia. On physical examination more or less malnutrition, anemia, and chest signs referabe to enlarged tracheobronchial nodes are found. In certain instances there may be in addition phlyctenular disease or skin tuberculosis.

Observations on the Capacity of the Stomach in the First ten Days of Postnatal Life.—SCAMMON and DOYLE (*Am. Jour. Dis. Children*, December, 1920) found that the average physiologic capacity of the stomach in the first day after birth is about 7 gm. This practically doubles in the second day, quadruples in the third day, and increases almost seven times in the fourth. After the fourth day the increase is much slower, and the average capacity on the tenth day is 81 gm., or over eleven times that of the first day. The average maximum physiologic capacity increases in much the same manner as the average physiologic capacity. It is about one-fourth greater than the average physiologic capacity on the first day, about two-thirds greater on the second day. After that the difference between the two measures decreases rapidly until the sixth day, after which the average maximum capacity remains about one-third greater than the average capacity. The relative physiologic capacity increases in much the same way as the absolute physiologic capacity. It is equal to 0.21 per cent of the birth weight of the body on the first day, to 1.38 per cent on the fourth day, and to 2.43 per cent on the tenth day. The relative maximum capacity is equal to 0.27 per cent of the initial body weight on the first day, to 1.96 per cent on the fourth, and to 3.17 per cent on the tenth day. In the first ten days the parity has no constant effect on the physiologic capacities of children having an initial body weight of from 2000 to 4000 gm. Sex has no effect on the physiologic capacity in this period. The average deviation in physiologic capacity rises rapidly from the first to the fourth day. After that it increases slowly. The percentage decreases rapidly until the fifth day, and after that continues to drop very slowly. All indices of physiologic capacity indicate that there is a distinct change in the nature of this value after the fourth day. Until this time the increase in capacity, in whatever manner it is calculated, is very rapid and afterward it is much slower. In the first four days the average deviation in capacity is increasing rapidly, and percentage deviation is decreasing rapidly. After this time both of these measures change very little. The anatomic capacity of the stomach at birth averages 33 c.c. This is increased about one-third in the first three or four days, and is little more than doubled in the second week. There is no indication of two definite stages in the development of anatomic capacity in the neonatal period corresponding to the two phases of physiologic capacity. Anatomic capacity and physiologic capacity approximate one another about the fourth day. After that physiologic capacity runs parallel to the anatomic capacity, but is slightly greater. This agrees with previous findings regarding this relation throughout the greater part of the suckling period. The curve representing average physiologic capacity in the first ten days of postnatal life shows two phases. The first segment, from birth to the fourth day, shows little relation to the actual capacity of the organ, but is rather a measure of the ability of the average mother to furnish nourishment in this period, and the ability of the average child to receive it. The second segment, extending from the fourth to the tenth day, is probably a fair measure of the actual increase in gastric capacity compared with similar increases of this value made at later times in the suckling period. The gastric capacities of children weighing 4000 gm. or over at birth are somewhat different from those of infants of lighter weights. Both the average and the maximum average physiologic capacities of this group are smaller than those of children of lighter weight in the first three or four days of postnatal life, but these values increase rapidly in the fifth and sixth days, and before the end of the period exceed those of smaller infants. Parity has a slight but distinct effect on physiologic capacity in this group of larger infants, and first-born children have a smaller capacity than do the later-born. The anatomic capacities of children of this group are somewhat greater absolutely, but smaller relatively than in children of the lighter group.

Empyema in Infants and Young Children.—SPENCE (*Am. Jour. Dis. Children,* December, 1920) says that the mortality in infants and very young children is high with all methods of treatment employed. About 11 per cent of all of the cases of pneumonia in the Babies' Hospital in New York during the past seven years either had empyema on admission or developed it during their stay in the hospital. The mortality rate decreased very rapidly as the age of the infant advances. Empyema was the sequel of pneumonia in every case of this series. When pneumonia is a complication of the common infectious diseases of childhood, the mortality is very high. Pneumococcus in pure culture was present in the pus from the pleural cavity in 70 per cent of the cases. The mortality from this type of infection was the lowest in the series. The degree of leukocytosis is no guide to prognosis or to diagnosis. In this hospital siphon drainage gave better results than any other form of treatment.

A Study of the Blood and its Circulation in Normal Infants and in Infants Suffering from Chronic Nutritional Disturbances.—UTHEIM (*Am. Jour. Dis. Children,* November, 1920) found in this study that the serum protein in normal infants was from 6 to 6.5 per cent. and remained at this level until the tenth or eleventh month, when the protein began to rise, and by the fifteenth month it had reached the same level as found in adults, about 8 per cent. Infants suffering from various diseases showed, with the exception of the exudative diathesis and nephritis no remarkable change in blood protein concentration, while infants with acute diarrhea or vomiting had a high percentage of protein, the result of blood concentration. Premature infants and athreptic infants showed a low protein percentage in the blood, in many cases as low as 4 per cent. This condition in premature infants is an expression of the influences of age and development on the water metabolism of the organism. As far as the athreptic infants were concerned, the low pro-